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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,467	11/28/2001	Matthew P.J. Baker	GB 000168	2280

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EXAMINER

PHAM, TUAN

ART UNIT PAPER NUMBER

2618

DATE MAILED: 04/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/995,467	Applicant(s) BAKER ET AL.	
	Examiner TUAN A. PHAM	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Applicant's remark, filed on 02/29/2006, with respect to the rejection(s) of claim(s) 1-14 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made of Jalali et al. (U.S. Pub. No.: 2006/0023666).

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1, 3, and 13 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, and 5 of copending Application No. 09/995,488. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1, 3, and 13 in the current application have the same scope of claimed inventions with obvious wording variations.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. **Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Jalali et al. (U.S. Pub. No.: 2006/0023666, hereinafter, "Jalali").**

Regarding claims 1, 3, and 13, Jalali teaches a radio communication system (see figure 1) having a communication channel comprising a plurality of path (see figure 1, plurality of path 118, [0037]) between transmitter having a plurality of antennas (see Fig. 1, transmitter 110, plurality antennas 116a-116t) and a receiver having at least one antenna (see Fig. 1, receiver 120, plurality of antennas 122a-122r), wherein the transmitter comprises:

path characterization means for determining at least one transmission property of each path of the plurality of paths (see Fig.1, path 118, [0038-0039]),

data categorization means for determining and assigning a data quality category to a set of data for transmission (data categorization means wherein certain types of data are categorized in accordance to a low bit rate, QOS, different type of data such as high data rate or low data rate, [0043-0047, 0057-0059]), said data categorization means being adapted to assign different categories to different segments of the set data from an application (see figure 1, [0051-0053]).

mapping means (see figure 9, mapping element 928) responsive to the data channel characterization means (see [0151]) and the data categorization means for determining a mapping to apply the set of data to the transmitter's plurality of antennas such that the set of data is transmitted over a channels in which the determined data quality of the set of data corresponds to the at least one transmission property of the channels (see figure 9, mapping element 928 is mapping data to each channel with low

data rate or high data rate to each path 118, [0150-0155), thereby determining over which channels the set of data will be transmitted (see figure 9, mapping element 928 is mapping data to each channel with low data rate or high data rate to each path 118, [0150-0155).

Regarding claim 2, Jalali further teaches the receiver comprises means for performing channel estimation and means for signaling details of the output of the channel estimation to the path characterization means ([0124, 0189]).

Regarding claim 4, Jalali further teaches a transmitter comprises the data for transmission may be provided from a plurality of sources and in that the categorization means is adapted to assign a category depending on the source of the data (data categorization means wherein certain types of data are categorized in accordance to a low bit rate, QOS, different type of data such as high data rate or low data rate, [0043-0047, 0057-0059]).

Regarding claim 5, Jalali further teaches a transmitter comprises the categorization means is adapted to assign different categories to respective segments of data from an application depending on at least one of their relative importance, required quality of service (data categorization means wherein certain types of data are categorized in accordance to a low bit rate, QOS, different type of data such as high data rate or low data rate, [0043-0047, 0057-0059]).

Regarding claim 6, Jalali further teaches a transmitter comprises the path characterization means is adapted to determine at least one of a delay, a signal-to-

noise ratio, and a required transmission power for a given signal-to-noise ratio or error rate for each path (see [0043]).

Regarding claim 7, Jalali further teaches a transmitter comprises parameter selection means are provided for setting at least one transmission parameter relating to the data depending on at least one of the channel assigned for transmission of the data and the category assigned to the data (data categorization means wherein certain types of data are categorized in accordance to a low bit rate, QOS, different type of data such as high data rate or low data rate for transmission on each channel, [0043-0047, 0057-0059]).

Regarding claim 8, Jalali further teaches a transmitter comprises a transmission parameter specifies the type of error control coding added to the data (see [0008]).

Regarding claim 9, Jalali further teaches a transmitter comprises a transmission parameter specifies the modulation scheme to be used for transmission of the data (see figure 1, modulation 114a, [0014]).

Regarding claim 10, Jalali further teaches a transmitter comprises signal-to-noise ratio to be achieved for at least one signal path (see [0036, 0187]).

Regarding claim 11, Jalali further teaches a transmitter comprises a plurality of spatially separated sites, each site comprising at least one antenna (see figure 1, plurality antenna 116a-116t).

Regarding claim 12, Jalali further teaches a transmitter comprises means are adapted to determine properties of the paths at least partly from measurements made

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by the receiver and signaled to the transmitter (see figure 1, transmitter 110, receiver 120, [0037-0039]).

Regarding claim 14, Jalali further teaches a transmitter comprises transmitting data requiring a higher quality of service over a better sub-channel than data requiring a lower quality of service (data categorization means wherein certain types of data are categorized in accordance to a low bit rate, QOS, different type of data such as high data rate or low data rate for transmission on each channel, [0043-0047, 0057-0059]).

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A. Pham whose telephone number is (571) 272-8097. The examiner can normally be reached on Monday through Friday, 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Anderson can be reached on (571) 272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit 2618
April 20, 2006
Examiner



Matthew Anderson
Supervisory Patent Examiner
Technology Center 2600

Tuan Pham